

REMARKS

Claims 1-9 and 15-24 are pending, of which Claims 1, 2, 7-9 and 21-24 are rejected and Claims 3-6 and 15-20 were objected to, but indicated as being allowable if written in independent form or if rewritten to overcome the objections. Claims 1, 4, 5, 15, 16 and 21 are amended herein. No new matter is added.

Applicants wish to make it of record that a second Ex Parte Reexamination has been filed by a third party for U.S. Patent 6,320,609 (Reexamination Control No. 90/007,630). Applicants point out that a Terminal Disclaimer was filed in the present case to overcome a double patenting rejection over U.S. Patent 6,320,609. The first Reexamination resulted in a Reexamination Certificate Issued on May 23, 2005, confirming all claims without amendment. The second Ex Parte Reexamination was filed July 14, 2005, citing substantially the same art as the first Ex Parte Reexamination with the addition of references that have been previously considered in the present application.

Claim Objections

Claims 4-5 were objected to as in Claim 4 "rotate" should read --rotated--; and in Claim 5, "from optical system" should read --from the optical system--. Appropriate correction has been made.

Claims 15-16 were objected to as in Claim 15, line 4, "the optical systems" lack antecedent basis and in Claim 16 "an optical system" should read "the optical system" and in line 3 "the optical systems" lacks antecedent basis. Appropriate correction has been made.

Applicant respectfully submits that Claims 15-20 are now in condition for allowance.

Claim Rejections – 35 U.S.C. §102

Claims 1, 2, and 8 were rejected under 35 U.S.C. §102(e) as being anticipated by Finarov (6,038,029) ("Finarov"). Applicant requests reconsideration.

Amended independent Claim 1 recites "moving the optical system rotationally to follow the edge of the wafer and locate an alignment feature on the edge of the wafer while the wafer is held linearly and rotationally stationary on the fixed station", which is similar to the limitation "moving an optical system rotationally relative to the wafer" found in Claim 15 that the Examiner has indicated is allowable.

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Finarov is related to an X-Y stage 54 and thus does not move the optical system rotationally.

Thus, Applicant respectfully submits that Claim 1 is patentable over Finarov. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2 and 8 depend from Claim 1 and are, therefore, likewise patentable. Moreover, objected to Claims 3-6 also depend from Claim 1 and are therefore now in condition for allowance.

Claim Rejections – 35 U.S.C. §103

Claims 7 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over Finarov in view of Cheng in view Cheng (5,546,179) (“Cheng”). Reconsideration is requested.

Claims 7 and 9 depend from Claim 1. Cheng does not make up for the deficiencies of Finarov. Accordingly, Applicant respectfully submits that Claims 7 and 9 is patentable over the combination of Finarov and Cheng. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 21, 22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Stone (4,593,406) (“Stone”). Reconsideration is requested.

Stone discloses “a point location system ... which presents a simple strategy for acquiring a subject element and centering the subject element within a field of view.” Col. 12, lines 31-34. In order to center the target, an image of the target is produced and the brightness at a predefined locus of points is detected within multiple quadrants of the image. Col. 9, lines 24-36. The servosystems 60, 62, and 64 move “the specimen 80 or microscope 76 until the count is equal in all of the quadrants within predetermined limits” at which time the specimen is aligned and the location of the center of the specimen is determined. Col. 9, lines 41-42, col. 9, lines 46-49 and lines 52-57; and see, col. 5, lines 19-39. Simply put, Stone teaches that the image of the specimen is rotated until the center is determined.

Claim 21, however, recites “the lateral movement and rotational movement permits the optical system to inspect a plurality of separate inspection areas on the wafer.” Stone does not teach or suggest inspecting a plurality of separate inspection areas on the wafer.

Additionally, Claim 21 recites “providing lateral movement of the optical system with respect to the wafer”. The Examiner cited the Theta servosystem 62, table 82, and microscope 76 in Fig. 2 as disclosing “providing lateral movement of the optical system with

respect to the sample through rotational movement between the optical system and the sample". Applicant respectfully disagrees as there is no "lateral movement of the optical system". Stone is disclosing lateral movement of the center of the image with respect to the specimen. Rotational movement of the optical system is not "lateral movement of the optical system" as recited in Claim 21.

Finally, the Examiner noted that Stone does not teach a wafer, but stated it would be obvious to "have the sample comprise a wafer in order to inspect miniature elements on the wafer via the microscope inspection system." Applicant disagrees. Stone is attempting to determine "the geometric center of an element having a known peripheral shape." Col. 5, lines 19-21. There is no reason that one skilled in the art would adapt the disclosure of Stone for use with a wafer.

Accordingly, Applicant respectfully submits that Claim 21 is patentable over Stone. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 22 and 24 depend from Claim 21 and are therefore patentable for at least the same reasons.

In addition, Claim 21 has been amended to recite

generating an image signal of at least one inspection area on the wafer using the optical system; and
processing the image signal to produce a rotated image of an inspection area based on the relative angular orientation of the optical system with the wafer."

Support for the amendment is found, e.g., in the paragraph beginning at page 9 line 27 of the specification. As discussed above, Claim 21 is patentable over Stone. Thus, the present amendment is not made for reasons related to patentability over Stone. The present amendment of Claim 21 is made so that the claim more closely corresponds to Applicant's present and/or future products.

Claim 23 was rejected under 35 U.S.C. §103(a) as being unpatentable over Stone in view of Sandland et al. (4,556,317) ("Sandland"). Reconsideration is requested.

Claim 23 depends from Claim 21 discussed above. Sandland does not make up for the deficiencies of Stone.

Moreover, Applicant points out that Sandland does not teach the rotation of the image, but instead rotation of the wafer. Sandland states "[i]t should be noted that the turntable 94 is rotated as the X-Y stage 28 is 'flipped' from the macro to the micro inspection station. This is done to correct for the rotation of the wafer due to the 'flipping' movement and image rotation produce by the macro and micro imaging systems." Col. 16, lines 27-32. Fig. 3 in

Sandland is instructive. As can be seen, the turntable 94 rotates as the X-Y stage 28 is "flipped" from the macro position to the micro position. Sandland is simply stating that the turntable 94 should be rotated to compensate for that rotation. Thus, Sandland does not disclosing "changing a rotation angle of the image produced by the optical system" as recited in Claim 23.

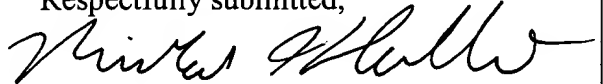
Further, Applicant submits that there is no motivation to combine Sandland and Stone, as Sandland is not related to rotating images.

Accordingly, Applicant respectfully submits that Claim 23 is patentable over the combination of Stone and Sandland. Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1, 4, 5, 15, 16 and 21 have been amended and Claims 1-9 and 15-24 remain pending. For the above reasons, Applicant respectfully requests allowance of Claims 1-9 and 15-24. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 982-8202.

**Via Express Mail Label No.
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